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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,074	03/13/2007	Gerhard Schwenk	SCHW3004/JJC	8660

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BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314-1176

EXAMINER

GRABOWSKI, KYLE ROBERT

ART UNIT	PAPER NUMBER
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3725

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,074	Applicant(s) SCHWENK ET AL.	
	Examiner Kyle Grabowski	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-17, 19 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17, 19 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-6, 8-12, 14-17, 19, 32, and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bratchley et al. (US 6,155,605) in view of Soules et al. (US 5,169,155) and Devrient (US 4,496,961).

4. In respect to claims 1-4, Bratchley et al. disclose a value document comprising: a value document substrate having two entities: at least one high security entity (HSE) and at least one low security entity (LSE), the HSE comprising a homogeneous (uniform) mixture of at least two components (Col. 3, 23-34); the LSE may be construed to be the "second feature substance" and the two components comprising the HSE may

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be construed to be the “first feature substance” and “third feature substance”; one entity (e.g. the HSE comprising the first and third feature substances) may be incorporated into the volume of the substrate (Col. 4, 57-61); the LSE comprising the second feature substance may be printed on the value document with a luminescent print (Col. 8, 35-65); the second feature substance extends over a “predominate part of a surface” of the document, the “part of a surface” being selected to be an area where the coding predominates.

5. Bratchley et al. does not explicitly disclose the LSE comprising a luminescent print extends over a predominant part of the total surface area of the value document however Soules et al. teach a similar LSE bar code coating (Col. 11, 9-13) which may be applied in alternating fashion over a predominant part of the total surface area of a high security playing card (Fig. 3) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the LSE coating taught in Bratchley et al. over a predominant part of the total surface area of the value document in view of Soules et al. to ensure for accurate reading as long as some portion of the card (or value document) passes over verification means (Col. 6, 67-Col. 7, 6).

6. Bratchley et al. substantially disclose the claimed subject matter for the reasons stated above but do not disclose the paper comprising two layers however Devrient discloses a check paper which comprises two disparate substances (leuco ink 1 and color receptor 2) which may coexist in a single layer of paper (Fig. 1) or alternately may comprise two separate layers, each comprising the each individual substance (Fig. 2) which are formed by a double-sieve machine (Fig. 5, Col. 5, 48-49). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to modify the first and third substances taught as a homogenous mixture within a paper volume in Bratchley into a two ply assembly, each ply having a respective substance in view of Devrient to process each sheet individually and without restriction e.g. special application conditions (Col. 5, 50-63). All of the claimed elements were known in prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Providing two HSE substances within the volume of a paper layer is known and although the substances taught in Devrient are very different, the teaching of separating the two substances into separate layers is completely applicable and would provide a predictable result to one of ordinary skill in the art regardless of the content of the substances.

7. In respect to claims 5 and 6, Bratchley et al. further disclose that the HSE and LSE (comprising the first, second, and third feature substances) may contain an array of materials including ones that exhibit luminescence et al. (Col. 5, 66 – Col. 6, 7).

8. In respect to claims 8, 10-12, 14-15, and 32, Bratchley et al. further disclose a bar code may comprise an additional element of the invention (e.g. LSE) construed to be the “fourth feature substance”; the fourth feature substance forming the bar code may comprise a plurality of substances including magnetic effects or IR/UV effects (Col. 5, 28-34); fluorescent effects may be may be invisible (Col. 4, 36-42); it is inherently disclosed that barcodes represent information of the article they are applied.

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9. In respect to claim 9, Bratchley et al. disclose a medley of LSE (second and fourth feature substances) appropriate materials, including an antistokes coating which is excitable (absorbent) in the IR range (Col. 8, 52-58).

10. In respect to claims 16 and 17, Bratchley et al. further disclose the substrate may be a paper or a plastic (which is coated or printed as disclosed above) (Col. 5, 7-8).

11. In respect to claim 19, Bratchley et al. in view of Soules et al. do not disclose these methods of paper marking, however, although a product-by-process claim is limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

12. In respect to claim 35, Bratchley et al. further disclose that the feature substances may be coated on the value document therefore extending over a substantially total surface thereof (Col. 4, 64 - Col. 5, 6).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bratchley et al. (US 6,155,605) in view of Soules et al. (US 5,169,155) and Devrient (US 4,496,961) as applied to claim 1 above, and further in view of Kaule (EP-B-0 052 624). Bratchley et al. as modified by Soules et al. substantially disclose the claimed subject matter for the reasons stated above including the inclusion of rare earth phosphors (Col.

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12, Table 2) but do not disclose providing a host lattice doped with earth metals as the feature substance(s), however, as disclosed by the applicant, Kaule discloses embodiments of host lattice and dopant combinations (0018) and as such providing rare earth phosphors in this manner is known. All of the claimed elements were known in prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It is known that rare earth phosphors may be manufactured within a host lattice (Kaule); it is known to provide rare earth phosphors in banknotes for security (Bratchley et al.). There is no unexpected result with providing the value document with the rare earth phosphor on the basis of a host lattice.

14. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bratchley et al. (US 6,155,605) in view of Soules et al. (US 5,169,155) and Devrient (US 4,496,961) as applied to claim 1 above, and further in view of *Anti-Stokes Phosphors/Luminophors* (ASPL). Bratchley et al. as modified by Soules et al. substantially disclose the claimed subject matter for the reasons stated above including the usage of Anti-Stokes material but do not disclose particulars of their excitation (absorption) wavelengths. ASPL discloses an Anti-Stokes phosphor FAM-810/1000-1 having a basic excitation wavelength of 1.5-1.6 μm . It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Anti-Stokes phosphor FAM-810/1000-1 as a suitable material for the Anti-Stokes coating taught in

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Bratchley since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

15. Applicant's arguments with respect to claims 1-12, 14-17, 19, and 32-35, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle Grabowski whose telephone number is (571)270-3518. The examiner can normally be reached on Monday-Thursday, every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571)272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyle Grabowski/
Examiner, Art Unit 3725

/Dana Ross/
Supervisory Patent Examiner, Art
Unit 3725